

IP Addressing Table				
Device	Interface	IP Address	Subnet Mask	Vlan
R1	G0/0.10	192.168.10.1	255.255.255.224	10
R1	G0/0.11	192.168.20.1	255.255.255.224	20
R1	G0/0.99	192.168.99.254	255.255.255.0	99
R1	G1/0	10.0.12.1	255.255.255.252	-
R1	G2/0	10.0.13.1	255.255.255.252	-
R1	G3/0	10.0.23.1	255.255.255.252	-
R1	G4/0	10.0.24.1	255.255.255.252	-
R2	G0/0.20	192.168.30.1	255.255.255.224	30
R2	G0/0.21	192.168.40.1	255.255.255.224	40
R2	G0/0.99	192.168.99.254	255.255.255.0	99
R2	G1/0	10.0.12.2	255.255.255.252	-
R2	G2/0	10.0.13.2	255.255.255.252	-
R2	G3/0	10.0.34.1	255.255.255.252	-
R2	G4/0	10.0.35.1	255.255.255.252	-
R3	G0/0.30	192.168.50.1	255.255.255.224	50
R3	G0/0.31	192.168.60.1	255.255.255.224	60
R3	G0/0.99	192.168.99.254	255.255.255.0	99
R3	G1/0	10.0.23.2	255.255.255.252	-
R3	G2/0	10.0.24.2	255.255.255.252	-
R3	G3/0	10.0.34.2	255.255.255.252	-
R3	G4/0	10.0.35.2	255.255.255.252	-
SW1	VLAN 99	192.168.99.1	255.255.255.0	99
SW2	VLAN 99	192.168.99.2	255.255.255.0	99

SW3	VLAN 99	192.168.99.3	255.255.255.0	99
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VLAN Table			
VLAN	Name	Network	Devices
10	HQ_VLAN10	192.168.10.0/27	PC1
11	HQ_VLAN11	192.168.20.0/27	PC2
20	BRANCH1_VLAN20	192.168.30.0/27	PC3
21	BRANCH1_VLAN21	192.168.40.0/27	PC4
30	BRANCH2_VLAN30	192.168.50.0/27	PC5
31	BRANCH2_VLAN31	192.168.60.0/27	PC6
99	Management	192.168.99.0/24	SW1, SW2, SW3

Network Topology:

- HQ: R1, SW1, PC1, PC2
- Branch1: R2, SW2, PC3, PC4
- Branch2: R3, SW3, PC5, PC6

**PORT ASSIGNMENT DETAILS:**

Switch	VLAN	Port Numbers (10 ports each)
SW1	10	Fa0/1,3,5,7,9,11,13,15,17,19
SW1	20	Fa0/2,4,6,8,10,12,14,16,18,20
SW2	30	Fa0/1,3,5,7,9,11,13,15,17,19
SW2	40	Fa0/2,4,6,8,10,12,14,16,18,20
SW3	50	Fa0/1,3,5,7,9,11,13,15,17,19
SW3	60	Fa0/2,4,6,8,10,12,14,16,18,20

**CONNECTIVITY TESTING RESULTS:**

Test	Source	Destination	Expected Result	ACL Impact
1	PC1 (HQ)	PC3 (Branch1)	SUCCESS	None
2	PC1 (HQ)	PC5 (Branch2)	SUCCESS	None
3	PC3 (Branch1)	PC5 (Branch2)	FAIL	Blocked by ACL
4	PC5 (Branch2)	PC3 (Branch1)	FAIL	Blocked by ACL
5	PC3 (Branch1)	PC1 (HQ)	SUCCESS	None
6	PC5 (Branch2)	PC1 (HQ)	SUCCESS	None

**OSPF CONFIGURATION:**

Router	Networks Advertised in Area 0
R1	192.168.10.0/27, 192.168.20.0/27, 192.168.99.0/24, 10.0.12.0/30, 10.0.13.0/30, 10.0.23.0/30, 10.0.24.0/30
R2	192.168.30.0/27, 192.168.40.0/27, 192.168.99.0/24, 10.0.12.0/30, 10.0.13.0/30, 10.0.34.0/30, 10.0.35.0/30
R3	192.168.50.0/27, 192.168.60.0/27, 192.168.99.0/24, 10.0.23.0/30, 10.0.24.0/30, 10.0.34.0/30, 10.0.35.0/30